and eight to ten feet above the roof of the building on which the mast was placed. The curves of this diagram show that the indications of collectors as near to each other as these were will often give practically identical results. At the same time it should be observed that local differences may, and do exist. Arrangements are now being made for the establishment of a station at the Smithsonian Institution, so that comparative observations at somewhat greater distances may be made.

The Chief Signal Officer recognizes the fact that the subject of atmospheric electricity is involved in great obscurity, but he desires to place some of the results of the observations now under way in the hands of those interested in the subject as early as possible. Much is to be done in the way of systematic observation and investigation before any generalization will be possible.

OPTICAL PHENOMENA.

SOLAR HALOS.

Solar halos were observed in the various states and territories during the month, as follows:

Alabama.—24th.
Arizona.—10th, 19th.
Arkansas.—8th, 12th, 23d, 27th.
California.—2d, 4th, 5th, 8th, 9th, 11th, 14th, 18th, 19th, 21st, 24th.
Colorado.—26th, 29th.
Connecticut.—11th.
Dakota.—4th, 7th, 17th, 25th, 30th.
District of Columbia.—29th.
Florida.—3d, 4th, 10th, 11th, 12th, 28th.
Georgia.—3d, 11th, 17th, 25th, 27th.
Idaho.—4th, 5th, 6th, 26th.
Illinois.—3d, 4th, 6th to 9th, 12th, 14th, 21st, 23d, 26th, 28th.
Indiana.—4th, 5th, 10th, 14th, 22d, 24th, 26th.
Iowa.—5th to 8th, 16th, 17th, 22d, 24th, 27th.
Kansas.—4th, 7th, 10th, 23d, 26th, 29th.
Kentucky.—5th, 10th, 14th, 16th, 17th, 23d.
Maine.—4th, 5th, 14th.
Massachusetts.—10th, 11th, 15th, 27th.
Michigan.—6th, 9th, 14th, 16th, 29th.
Minnesota.—8th, 22d.
Missouri.—8th.
Montana.—1st, 5th, 7th.
Nevada.—4th, 5th, 8th, 9th, 14th, 21st.
New Jersey.—17th, 24th, 28th, 29th.
New York.—8th, 9th, 11th, 15th, 17th, 18th, 19th, 21st, 22d, 23d, 25th, 30th.
North Carolina.—4th, 10th, 11th, 18th, 19th, 24th, 25th, 29th.
Ohio.—2d to 5th, 7th, 8th, 9th, 11th, 14th to 18th, 25th, 29th.
Oregon.—4th, 5th, 25th, 27th, 28th.
Pennsylvania.—3d, 10th, 11th, 14th, 15th, 18th, 24th, 30th.
South Carolina.—3d, 4th, 11th, 21st, 25th, 27th, 28th.
Tennessee.—8th, 9th, 10th, 14th, 18th, 25th, 26th, 27th.
Texas.—2d, 11th, 13th.
Vermont.—4th, 30th.
Virginia.—2d, 10th, 11th, 14th, 20th, 24th, 27th, 29th.
Washington Territory.—5th, 6th, 18th, 19th, 21st, 22d, 27th, 28th.
Wisconsin.—6th, 7th, 8th, 17th, 22d.
Wyoming.—1st, 6th, 7th, 9th, 10th, 11th, 13th, 16th, 25th, 29th, 30th.

LUNAR HALOS.

Lunar halos were observed in the various states and territories, as follows:

Arizona.—10th.
Arkansas.—11th, 16th.
California.—14th, 18th.
Colorado.—13th.
Dakota.—10th, 12th, 13th, 15th.
District of Columbia.—10th, 11th, 12th, 14th, 15th, 19th.
Florida.—11th, 12th, 15th.
Georgia.—10th, 12th.
Idaho.—11th, 16th.
Illinois.—6th, 7th, 9th, 11th, 12th, 15th, 16th, 17th.
Indiana.—1st, 8th, 9th, 13th, 15th, 17th, 18th, 22d, 24th.
Iowa.—12th, 13th, 14th, 23d.
Kansas.—11th, 13th, 14th, 16th.
Kentucky.—9th, 10th, 14th, 16th to 19th.
Louisiana.—11th.
Maine.—12th.
Maryland.—10th, 18th.
Massachusetts.—3d, 9th, 11th.
Michigan.—10th, 11th, 13th, 14th, 16th, 17th.
Minnesota.—12th, 14th, 17th.
Mississippi.—11th, 13th.
Missouri.—11th to 14th.
Nebraska.—15th, 16th.
New Jersey.—10th, 11th, 12th, 17th.
New Mexico.—10th.
New York.—9th, 10th, 12th, 14th to 19th.
North Carolina.—11th, 12th, 15th, 18th, 19th.
Ohio.—12th, 14th to 18th.
Oregon.—19th, 22d.
Pennsylvania.—9th, 12th, 14th.
Rhode Island.—12th.
South Carolina.—10th, 16th.
Tennessee.—7th, 12th, 13th, 14th, 16th.
Texas.—8th to 11th, 13th, 17th, 18th.
Utah.—16th.
Vermont.—12th, 14th.
Virginia.—10th, 11th, 14th, 17th, 18th, 19th.
Washington Territory.—11th, 15th, 16th, 25th.
Wisconsin.—9th, 13th, 14th, 15th, 17th.
Wyoming.—10th, 13th, 14th, 15th.

The phases of the moon (Washington mean time), as given in "The American Ephemeris and Nautical Almanac" for 1886, are as follows: new moon, 3d, 21 h. 22.4 m.; first quarter, 11th, 3 h. 35.8 m.; full moon, 17th, 21 h. 50.9 m.; last quarter, 25th, 12 h. 7.2 m.; apogee, 26th, 11.0 h.; perigee, 14th, 12.4 h.

MIRAGE.

Rochester, New York: on the afternoon of the 10th a very distinct mirage was seen at Rochester. Points nine miles distant, including Mount Hope and surroundings, were plainly discernible from the Rome, Watertown, and Ogdensburg Railroad track, near Charlotte. From the same point of view, the Erie Railroad, eight or nine miles distant, with moving train, was plainly seen.

Port Huron, Michigan: a mirage was observed at 5.30 p. m. of the 21st, northeast of this station; miles of ice and several small vessels could be distinctly seen over Lake Huron.

New Haven, Connecticut, 22d: on Long Island Sound vessels appeared elevated much above their actual position and under them their inverted images were seen; low lying land presented to view high bluffs.

Willcox, Arizona: mirage was observed every day during the month.

Mirage was also observed at the following places:
Duluth, Minnesota, 6th, 18th.
Mackinaw City, Michigan, 8th, 9th.
Oswego, New York, 11th.
Marquette, Michigan, 29th.

MISCELLANEOUS PHENOMENA.

EARTHQUAKE.

Bainbridge Island, Washington Territory: a slight earthquake was felt at 10.05 p. m. on the 16th; it had a tremulous motion and lasted about thirty seconds.

INSECTS.

Mr. John F. Bayerly, voluntary observer at Spartanburg, Spartanburg county, South Carolina, reports that grasshoppers have been seen in large numbers since the 15th.

METEORS.

Charlotte, North Carolina: a meteor was observed at 11.10 p. m. of the 20th. It descended rapidly at an angle of about 15° from the perpendicular. Meteors were also seen at this place on the 8th and 22d.

Walla Walla, Washington Territory: a large meteor was seen to fall from the heavens about 4.30 a. m. of the 19th, as it

passed on its downward zig-zag course it left a long trail of light which gradually faded away into smoke. The meteor was accompanied by a hissing sound and shaped like a large ball of fire. It was seen by a number of people here.

Fort Spokane, Washington Territory: at 7.40 a. m. of the 19th a large red meteor, about the apparent size of the full moon, was observed moving across the southeastern portion of the sky at an altitude of 70°. This meteor did not move in a straight line but in a sinuous course and just before it reached the horizon exploded with a report louder than a cannon.

Mountainville, New York: at 10.20 p. m. of the 22d two meteors were observed, one moving from the zenith toward the southeast, the other may have been a continuation of the first after passing behind a cloud.

Lansing, Michigan: on the 22d a meteor was observed at 9.20 p. m., in the west, midway between the horizon and the zenith. It had a downward southerly course of about 20°; during its passage across the sky it gave a bright light like continuous sheet-lightning. The meteor was visible for several seconds.

Somerset, Bristol county, Massachusetts: 22d, at 8.05 p. m. a meteor passed from near Jupiter to the southwest, leaving a trail of yellowish white haze about 10° long. The meteor was as bright as Jupiter and burst when about 8° above the southwestern horizon.

Chincoteague, Virginia: at 9.58 p. m. of the 22d a large and brilliant meteor shot through the heavens, giving light similar to the flashes of an electric light. Its path was from south to northwest, and was visible seven or eight seconds.

Meteors were also reported in the various states, as follows:

Arkansas.—Lead Hill, 23d.

Florida.—Archer, a meteor was observed on the 27th at 7.45 p. m. as large as Jupiter; Manatee, 7th and 8th.

Illinois.—Charleston, 12th, 21st, and 22d.

Ohio.—Wauseon, 2d.

Virginia.—Marion, 10th.

MIGRATION OF BIRDS.

Geese flying northward.—Eastport, Maine, 1st; Corsicana, Texas, 1st, 2d, 7th; Poplar River, Montana, 1st, 14th; Liberty Hill, Louisiana, and Clayton, New Jersey, 2d; Linkville, Oregon, 3d, 21st to 24th; Saint Vincent, Minnesota, 4th, 9th, 11th, 12th, 14th, 17th, 24th, 30th; Red Bluff, California, 5th, 6th, 7th, 14th, 15th, 16th, 20th, 25th; Albany, Oregon, 6th, 7th, 8th, 10th, 11th, 20th, 23d, 24th, 25th; Albany, New York, and Wakefield, Kansas, 7th; Fort Cœur d'Alene, Idaho, 7th, 17th; Palmyra, New York, and Troy, Pennsylvania, 8th; Fort Assinaboine, Montana, and Worcester, Massachusetts, 10th; Princeton, California, 16th; Ocean City, Maryland, 16th, 24th; Moorestown, New Jersey, 18th; Astoria, Oregon, 18th, 19th, 21st to 24th; Embarras, Wisconsin, 18th, 22d; Bismarck, Dakota, 19th, 20th; Fort Buford, Dakota, 20th; Grand Haven, Michigan, 22d, 23d; Olympia, Washington Territory, 24th; Port Huron, Michigan, 25th, 26th.

Geese flying southward.—Worcester, Massachusetts, 8th; Embarras, Wisconsin, 22d.

Ducks flying northward.—Embarras, Wisconsin, 10th, 11th.

POLAR BANDS.

Polar bands were reported during the month by the following stations:

Wauseon, Ohio, 2d, 3d, 29th.
Portland, Maine, 24th.
El Paso, Texas, 1st, 22d, 25th.
Montrose, Colorado, 3d, 11th.
Riley, Illinois, 23d.
Ninnescah, Kansas, 9th, 21st, 22d, 27th, 28th.
Beverly, New Jersey, 10th.
Cornish, Maine, 27th.
Napoleon, Ohio, 3d.
Stateburg, South Carolina, 10th.
Dale Enterprise, Virginia, 15th, 16th.
Prairie du Chien, Wisconsin, 8th, 13th, 17th, 22d.
Archer, Florida, 27th, 28th.

SUN SPOTS.

Prof. David P. Todd, director of the Lawrence Observatory, Amherst, Massachusetts, furnishes the following record of sun spots for April, 1886:

Date—April, 1886. Standard time.	No. of new.		Disappeared by solar rotation.		Reappeared by solar rotation.		Total No. visible.		Remarks.
	Gr'ps	Spots	Gr'ps	Spots	Gr'ps	Spots	Gr'ps	Spots	
1, 1 p. m.	2	20‡	.....	.....	.....	.....	6	70‡	
2, 11 a. m.	1	30‡	0	0	0	0	7	100‡	
3, 5 p. m.	0	15‡	0	0	0	0	7	115‡	
8, 6 p. m.	.....	.....	.....	.....	0	0	2	10‡	
9, 11 a. m.	0	0	0	0	0	0	2	5	Broad areas of faculæ.
10, 2 p. m.	2	6	1	4	0	0	3	7	Do.
11, 3 p. m.	0	0	0	0	0	0	3	6	Do.
14, 5 p. m.	1	1	.....	.....	.....	.....	1	1	
16, 1 p. m.	1	7	0	0	0	0	2	8	
17, 6 p. m.	0	0	0	0	0	0	2	6	
18, 5 p. m.	1	1	.....	.....	1	1	2	4	
19, 4 p. m.	2	10‡	0	0	1	8‡	4	15‡	
20, 6 p. m.	1	3	0	0	1	3	5	20‡	
21, 4 p. m.	1	15‡	0	0	.....	.....	6	35‡	
22, 6 p. m.	0	0	0	0	0	0	6	30‡	
23, 5 p. m.	0	0	0	0	0	0	5	25‡	
25, 11 a. m.	0	10‡	0	0	0	0	4	30‡	
26, 6 p. m.	0	0	1	2	0	0	3	25‡	
30, 11 a. m.	3	40‡	.....	.....	.....	.....	7	65‡	

Faculæ were seen at the time of every observation. ‡Approximated.

Mr. H. D. Gowey, of North Lewisburg, Champaign county, Ohio, reports having observed sun spots on the following dates: 3d, 8th, 9th, 14th, 15th, 16th, 18th to 30th.

SUNSETS.

The characteristics of the sky, as indicative of fair or foul weather for the succeeding twenty-four hours, have been observed at all Signal Service stations. Reports from one hundred and fifty-nine stations show 4,746 observations to have been made, of which one was reported doubtful; of the remainder, 4,745, there were 4,128, or 87.0 per cent., followed by the expected weather.

PRAIRIE AND FOREST FIRES.

North Platte, Nebraska: extensive prairie fires occurred near this place during the 18th, 19th, and 20th, which spread very fast and burnt over a vast area on account of the high wind prevailing.

Saint Paul, Minnesota: a destructive prairie fire swept over the entire northern tier of townships in Goodhue county on the 9th. An immense amount of damage was done, but only a partial list of losses has been reported. Several farmers lost their barns and out-houses, and a large amount of grain was destroyed, besides dozens of cattle, horses, and hogs. So far as reported the total loss will be over $100,000. The fire was stopped by a heavy rain.

Philipsburg, Centre county, Pennsylvania: 18th, forest fires were seen at 4.30 p. m. in the east-northeast.

Centralia, Columbia county, Pennsylvania: during the 22d and 23d fierce mountain fires raged through the country in this vicinity. Considerable valuable timber was destroyed. Profiting by former years' experience the coal operators removed the brush and timber surrounding the breakers, thus diminishing the danger to valuable coal properties.

Helvetia, Randolph county, West Virginia: 30th, many bush fires have prevailed since the middle of the month, causing some damage.

Fort Yates, Dakota: prairie fires were seen in all directions on the 18th and 24th.

Huron, Dakota: the prairie adjoining the town was on fire during the 18th, destroying a number of barns and out-houses.

Webster, Day county, Dakota: on the 17th a fire swept over the prairie in Linn Lake township, destroying a farm-house, as well as the out-buildings and stock.

Pike's Peak, Colorado: an extensive prairie fire was seen on the eastern horizon during the 15th.

Fort Reno, Indian Territory: prairie fires were seen every day of the month after the 5th.

Humphrey, New York: forest fire, 23d.

Lynchburg, Virginia: forest fire, 19th.

Yankton, Dakota: the prairie in the vicinity of this place was burning from the 14th to the 24th, inclusive.

Prairie fires have also been reported at—
Fort Sill, Indian Territory, 15th and 19th.
Valentine, Nebraska, 16th, 17th, and 18th.
Fort Assinaboine, Montana, 11th to 14th.
Poplar River, Montana, 5th, 8th, 11th, 12th, and 13th.
Saint Vincent, Minnesota, 13th, 16th, 17th, 18th, 24th.
Fort Supply, Indian Territory, 7th, 14th, and 15th.
Concordia, Kansas, 15th.
Fort Elliott, Texas, 1st and 2d.
Ninnescah, Kansas, 20th.
Fort Stockton, Texas, 3d.
Midland, Texas, 24th.

SAND STORMS.

Fort McDowell, Arizona, 11th.
El Paso, Texas, 3d, 8th, 12th, 13th.
Yuma, Arizona, 11th, 13th, 19th, 27th.

WATER-SPOUTS.

Schooner "Emily Shepard," E. Coggins, commanding, reports: "Water-spout passed to north of vessel from northeast to southwest at 3 p. m. on the 8th, in N. 32°, W. 73° 30′."

Captain A. M. Shaw, of the brigantine "Achsah," observed a large water-spout within a quarter of a mile of the vessel at 5 p. m. April 22d, in N. 28° 30′, W. 70° 15′.

S. S. Craigendoran, April 22d, at 11 a. m., in N. 28° 10′, W. 79° 38′, observed a large water-spout trending in a northerly direction; a moderate northeast breeze and fair weather prevailed at the time. The diameter of the water-spout was about sixty feet.

ERRATA.

In the REVIEW for February, 1886, page 55, table of "Meteorological record of voluntary observers and Army post surgeons," Strafford, Vermont, minimum temperature 24°, should read —24°.

In the December, 1885, REVIEW, page 306, table of "Temperature of water," Boston, Massachusetts, "Observations interrupted by ice from 7th to 31st," this note should refer to Sandusky, Ohio, Boston record being unbroken during the month.

Meteorological record of voluntary observers and Army post surgeons, April, 1886.

The maximum and minimum temperatures at stations marked thus (*) are from readings of other than standard instruments.

Stations.	Temperature. Maximum.	Minimum.	Mean.	Rainfall.
Alabama.	°	°	°	*Inches*
Birmingham *	83	31	61.8	5.19
Greensborough	82	37	63.6	6.97
Mount Vernon B'ks.	88	34	65.4	7.11
Prattville	84	32	61.5	5.34
Arizona.				
Huachuca, Fort	79	34	56.5	trace.
Lowell, Fort	91	33	65.3	0.14
McDowell, Fort	91	33	63.9	0.20
Tucson				0.06
Verde, Fort	81	33	58.9	trace.
Arkansas.				
Lead Hill *	91	29	60.0	5.44
California.				
Alcatraz Island	72	45	53.2	4.20
Angel Island	78	40	55.4	5.43
Benicia Barracks	73	43	55.2	4.76
Bidwell, Fort	72	25	44.6	2.20
Cahuenga				3.00
Gaston, Fort	89	34	53.1	9.23
Hydesville				9.15
Mason, Fort	70	50	58.7	5.08
Murietta *	78	34	54.1	3.79
Nicolaus *	74	47	56.6	4.93
Oakland	77	39	54.4	5.11
Oroville *	82	44	60.3	5.48
Poway *	78	45	56.2	2.67
Presidio of San F	80	38	53.9	4.86
Princeton *	82	35	56.2	3.53
Sacramento *	83	36	58.4	4.12
Salinas	75	38	51.7	3.83
California—Cont'd.				
San Rafael	83	32	53.3	8.30
Santa Barbara	74	38	55.7	3.40
Susanville	71	32	43.9	1.15
Colorado.				
Colorado Springs	75	20	44.7	4.82
Lewis, Fort	65	16	39.6	2.74
Pueblo	79	21	49.6	1.71
Salida	70	15	42.3	3.74
Connecticut.				
Bethel				2.02
Hartford	84	27	49.1	3.35
North Colebrook *	77	25	45.7	1.50
Voluntown	82	30		2.52
Dakota.				
Abr. Lincoln, Fort	83	9	45.9	1.44
Meade, Fort	78	12	43.7	2.17
Pembina, Fort	82	— 2	43.8	2.85
Randall, Fort	84	4	49.5	3.39
Richardton	75	12	43.9	2.40
Sisseton, Fort	79	4	46.1	3.06
Sully, Fort	82	13	48.4	2.32
Totten, Fort	83	0	43.3	1.03
Vermillion				3.60
Webster	81	0	49.5	7.72
Yates, Fort	81	10	46.8	2.80
District of Columbia.				
Distributing Res'r*	86	37	58.5	5.43
Kendall Green	84	35	54.4	5.38
Receiving Res'v'r*	85	36	57.7	4.45
Rock Creek Bridge*	92	37	60.2	

Meteorological record of voluntary observers, etc.—Continued.

Stations.	Temperature. Maximum.	Minimum.	Mean.	Rainfall.
Florida.	°	°	°	*Inches*
Archer *	90	37	63.3	4.19
Gatlin, Fort	88	45		
Limona *	93	47	70.6	3.28
Manatee *	90	51	75.0	
Meade, Fort				4.10
Merritt's Island	85	49	67.0	8.90
St. Augustine, Fort	85	45	64.8	3.79
Tallahassee *	83	38	67.2	2.15
Georgia.				
Athens	80	31	61.8	4.59
Dahlonega *	84	28	61.3	4.66
Forsyth *	86	36	64.1	1.88
Milledgeville	86	31	63.8	1.29
Quitman *	84	40	63.5	2.50
Idaho.				
Boise Barracks	76	29	49.6	1.59
Cœur d'Alene, Fort	70	28	45.9	1.50
Illinois.				
Anna *	84	27	58.2	3.45
Bloomington	81	20		1.87
Collinsville	84	26	56.6	1.71
Charleston *	84	25	55.6	2.73
Geneseo *	80	10	52.4	2.17
Mattoon *	84	25	57.0	2.39
Pekin *	83	18	50.5	2.71
Peoria	88	23	57.7	2.75
Riley	78	8	47.4	3.76
Rockford *	77	4	48.5	4.36
South Evanston	83	12	43.5	2.16
Sycamore	76	3	48.3	5.14
Windsor	83	22	54.5	2.17
Indian Territory.				
Reno, Fort	84	22	58 5	2.80
Supply, Fort	83	21	55.6	1.73
Indiana.				
Fort Wayne *	85	26	55.0	2.82
Jeffersonville	84	30	57.5	2.83
Knightstown	86	23	52.8	1.77
Laconia	92	26	57.4	3.99
Lafayette	82	19	53.9	1.80
LaGrange	80	18	51.7	2.13
Logansport *	85	26	57.7	2.20
Mauzy	79	15	50.7	3 35
Spiceland	81	22	53.3	2.20
Sunman *	84	21	55.5	4.14
Terre Haute *	81	29		2.44
Vevay	85	28	55.9	2.55
Iowa.				
Bancroft	84	12	49.0	3.01
Cedar Rapids *a* *	82	20	51.5	2.16
Cedar Rapids *b* *	81	11	51.0	
Clinton *	82	4	51.3	1.93
Cresco	80	15	48.1	2.37
Des Moines	82	17	52.0	
Independence *	76	21	50.4	1.78
Logan	84	18	52.5	2.10
Fort Madison	80	25		1.40
Manchester	81	17	52.0	2.01
Monticello *	82	14	50.9	1.80
Mount Vernon *	88	20	55.0	
Muscatine	86	15	50.3	2.62
Oskaloosa *a* *	87	20	52.6	2.25
Oskaloosa *b* *	82	21		
Kansas.				
Allison	83	20	49.1	4.84
Atchison *	84	22	53.4	2.22
El Dorado	83	22	56.8	
Elk Falls				1.73
Emporia *	81	18		2.48
Fort Scott	87	28	56.8	
Hays, Fort	83	13	49.6	3.16
Independence *	89	24	55.3	4.98
Manhattan *a*	86	18	54.8	4.34
Manhattan *b* *	88	18	53.7	4.76
Ninnescah	85	23	57.2	1.22
Riley, Fort	87	19	55.6	2.68
Salina	86	18	50.8	1.09
Sterling	82	20	53.7	4.50
Topeka *b* *	85	16	53.5	1.59
Topeka *a*	88	19	58.7	1.74
Wakefield *	91	21	53.9	4.31
Wellington	85	19	54.3	3.25
W. Leavenworth *	85	26		1.01
Westmoreland *	82	11		5.75
Wyandotte	80	19	49.5	1.80
Yates Centre	82	24	53.7	1.70
Kentucky.				
Frankfort	85	28	56.4	5.44
Penrod *	88	28		
Richmond	80	28	55.3	3.98
Louisiana.				
Grand Coteau	84	40	67.8	8.64
Liberty Hill *	79	50	70.5	3.77
Luling *	85	38		0.41
Maine.				
Bar Harbor	76	25		1.07
Buckfield *	80	25		1.12
Cornish *	77	21	46.1	3.08
Gardiner	74	22	44.5	1.43
Kent's Hill	79	23	42.5	1.70
Orono *	76	19	43.6	1.80
Maryland.				
Cumberland	80	30	54.8	2.18
Fallston *	84	32	52.1	2.53
Great Falls *	88	33	55.7	4.21
McDonogh	83	30	59.4	2.11
McHenry, Fort	84	33	54.1	2.68
Woodstock	84	28	53.5	2.17
Massachusetts.				
Amherst *a* *	83	31	50.8	2.06
Amherst *b*	83	21	50.4	1.73
Blue Hill Obs'y	79	24	45.8	2.16
Deerfield	83	24	49.9	3.62
Dudley	78	25	50.4	1.64
Fall River	75	26	47.7	2.10
Mendon *	80	30	49.6	
Milton	78	31	47.5	3.56
New Bedford	74	27	46.9	2.11
Princeton	78	21	46.1	2.85
Somerset *	84	28	50.2	2.08
Taunton	84	29	49.1	2.14
Worcester *	70	28	47.4	2.20
Westborough *	83	27	51.5	2.40
Williamstown	76	23	48.2	1.56
Michigan.				
Birmingham	80	17		1.96
Brady, Fort	76	0	41.9	2.04
Harrisville *	78	5		3.22
Hudson	83	12		1.19
Kalamazoo	80	19		1.13
Lansing	80	16	50.2	1.51
Mottville *	83	18		2.06
Pentwater	79	3	45.8	1.89
Thornville	83	18	49.8	2.84
Traverse City *	82	4		2.48
Minnesota.				
Minneapolis	81	14	49.2	3.62
Northfield	79	14	49.0	7.31
Preston *	83	19		
Snelling, Fort	82	14	49.8	4.80
Missouri.				
Carthage	87	26	58.7	1.54
Central College *	84	24	55.9	3.57
Centreville	84	19		4.26
Conception *	80	18	49.7	2.70
Springfield *	81	21	53.4	2.90
Warrenton *	83	25	56.7	
Montana.				
Assinaboine, Fort	79	0	47.7	1.83
Ellis, Fort	74	20	40.8	3.78
Keogh, Fort	77	16	51.2	0.26
Missoula, Fort	66	26	45.4	1.04
Shaw, Fort	74	19	44.9	2.30
Nebraska.				
Crete	82	17	50.1	4.20
De Soto *	85	17	51.0	2.23
Fairbury				3.88
Fremont *	76	16	49.2	3.89
Genoa	82	15	48.3	2.21
Hay Springs *	78	5	40.6	1.83
Marquette				2.44
Niobrara, Fort	90	15	46.0	2.21
Robinson, Fort	76	12	46.6	0.47
Sidney, Fort	77	11	42.6	0.64
Stockham				1.60
Nevada.				
Carson City	74	20	47.5	0.25
Halleck, Fort	69	20	42.8	1.18
McDermit, Fort	69	20	42.5	2.02
New Hampshire.				
Antrim				1.70
Ashland				1.43
Belmont				1.41
Berlin Mills	79	22		1.20
Bristol				1.61
Lake Village				2.19
Nashua	84	23	48.8	1.62
Wier's Bridge				1.54
Wolfborough				2.20
Woodstock				1.55
New Jersey.				
Beverly *	85	30	50.6	5.48
Clayton *	86	31	51.8	2.66
Dover *	84	27	48.8	3.39
Egg Harbor City	90	3	52.0	9.20
Moorestown	84	28	50.9	3.16
Paterson *	85	33	49.8	3.83
Princeton	82	29	52.0	2.99
Readington *	88	32	55.3	
South Orange *	82	32	51.4	3.00
Vineland	73	32	53.9	2.52
New Mexico.				
Bayard, Fort	82	23	54.7	
Gallinas Spring	79	30		1.75
Puerto de Luna	78	32	54.1	0.39
Selden, Fort	91	33	62.9	
Union, Fort	74	12	46.2	3.22
Wingate, Fort	74	21	45.6	1.08
New York.				
Auburn	77	33	49.3	3.69
Columbus, Fort	82	29	49.7	3.48
Cooperstown *	75	24	46.0	1.86
David's Island	86	29	49.2	1.75
Factoryville *	80	24	48.5	2.68